

The purpose of this experimental license is to validate the technological and economic case for expanded use of unused UHF spectrum (TV White Space) for high speed last mile broadband.

Over recent years the expectations of 'broadband' have increased dramatically. Users expect multi megabit service and existing TVWS technologies, based on single channel operation, are severely compromised.

This deployment is designed to validate the use of high order modulation, multi channel operation, and higher power to deliver service to sparsely populated areas. In these areas there are generally a large number of vacant TV channels which facilitates this approach. These areas are often remote from populations meaning higher power will not adversely affect TV reception in the distant communities.

The Deployment is a point to multi point solution, with the Base station located on an existing TV transmitter tower, below the current Transmitter antenna. The Base station uses an omni antenna to serve the surrounding area. The client devices are fixed to homes and businesses and use a directional antenna – pointed at the base station to close the link.

The license asks for use of spectrum in the range 470 -698 MHz although the deployment will only use unused portions of that spectrum as identified by an FCC certified TVWS database.

The deployment will aggregate some of these unused channels in to an up-link and down-link.

Channels will be chosen based on the information provided by the TVWS database to ensure that no harmful interference is created to TV broadcast.

The devices will be manually configured. However the TVWS database will be periodically checked to ensure that the channels utilized are still legitimately vacant.

Further information can be provided on request. The applicant will coordinate the deployment with the SBE. The TVWS database will also allow for identification and coordination with any licensed auxiliary services.